

**A**Fully  
Folded $i = 0$ Partition  
1 $i = 1$  $i = 2$  $i = 144$  $\dots i = 2,046$ Partition  
2 $i = 2,047$  $i = 2,048$  $i = 2,190$  $\dots i = 4,092$ 

⋮

Partition  
5 $i = 7,161$  $i = 7,162$  $i = 7,314$  $\dots i = 9,207$ Fully  
Unfolded $i = 9,208$ 

Figure 1A

B

$$\Delta ASA = (ASA_{\text{unfolded unit}} + ASA_{\text{complimentary}}) - (ASA_{\text{native unit}})$$

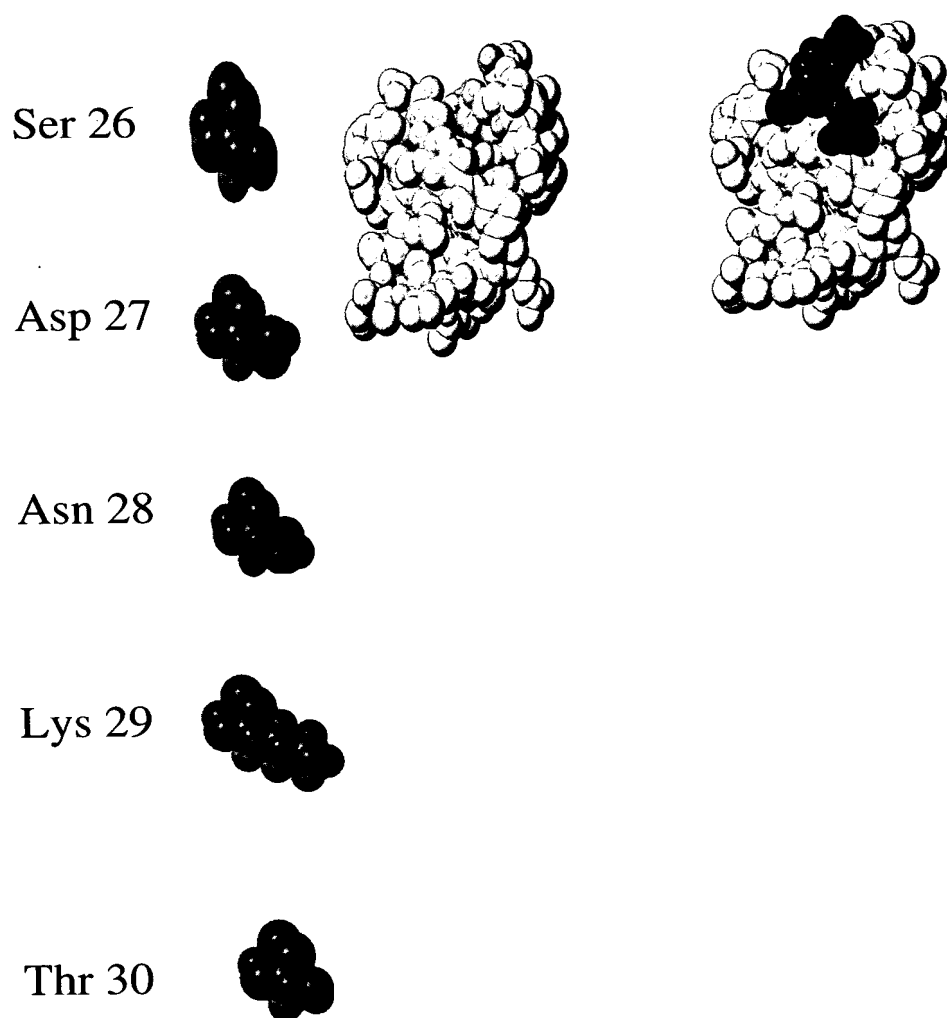


Figure 1

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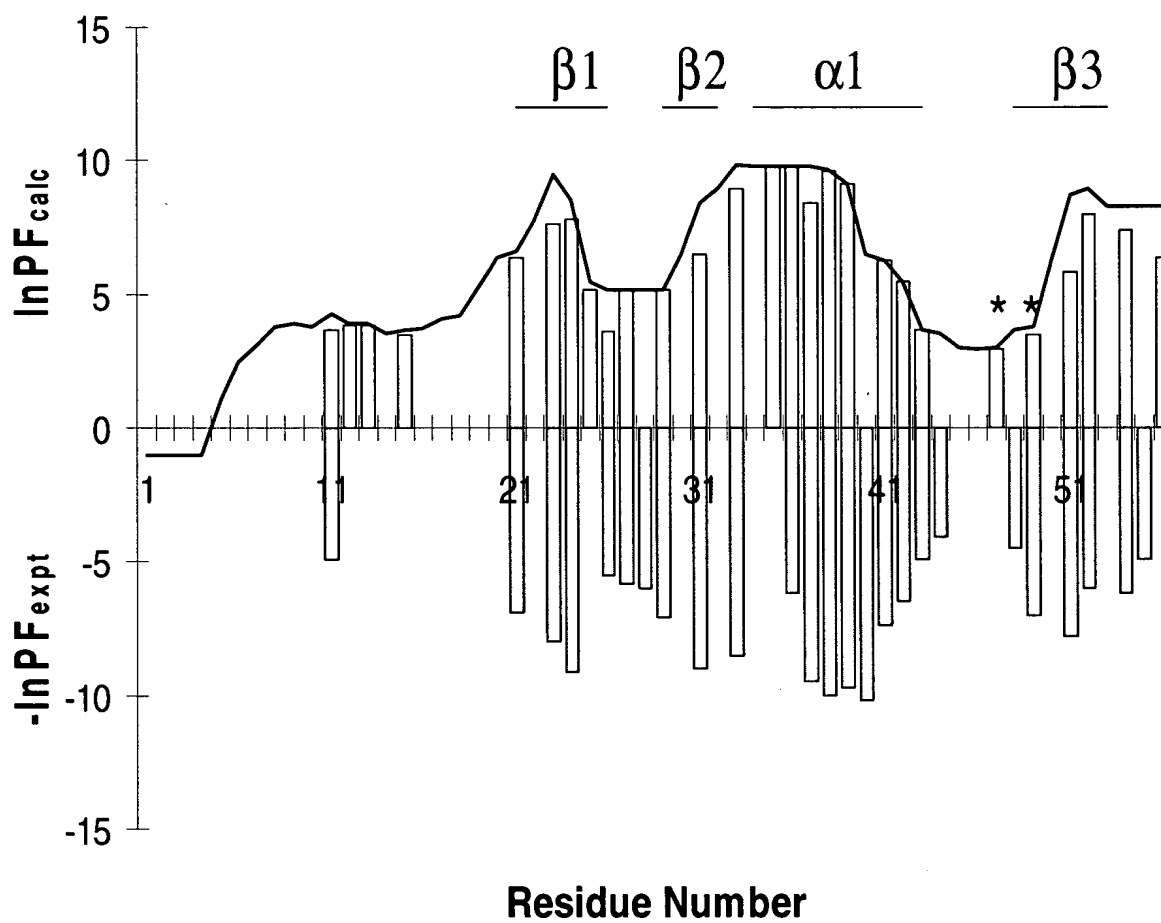


Figure 2

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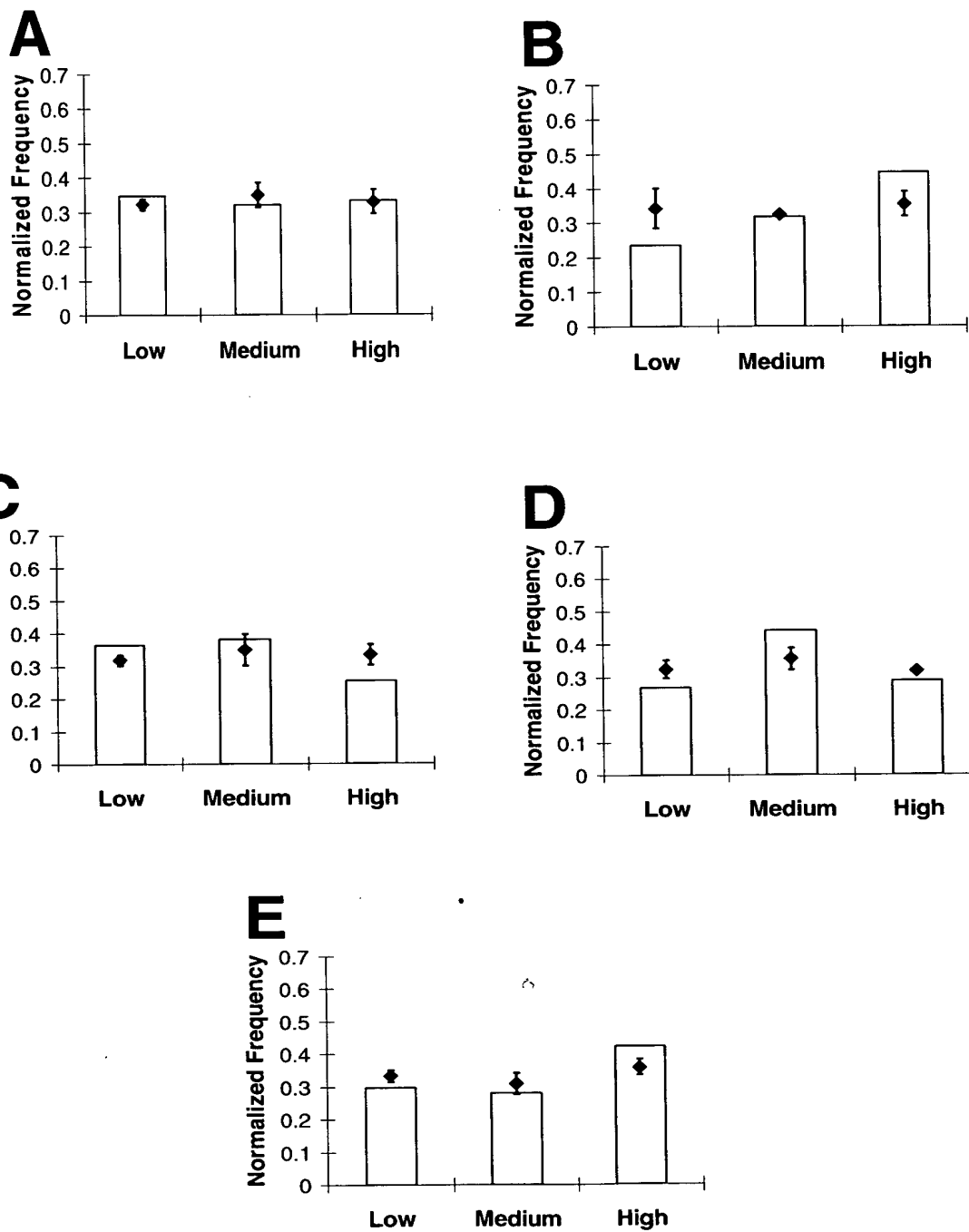


Figure 3

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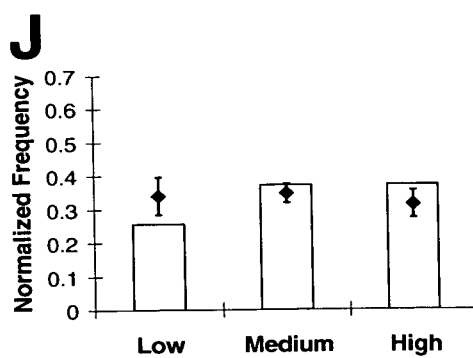
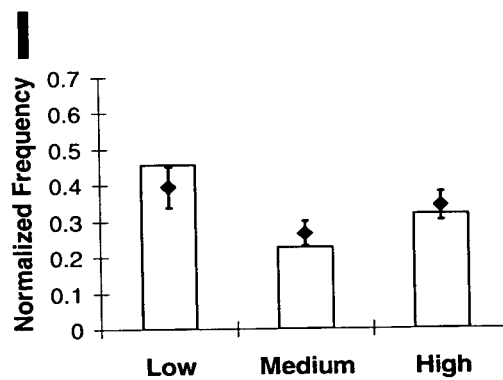
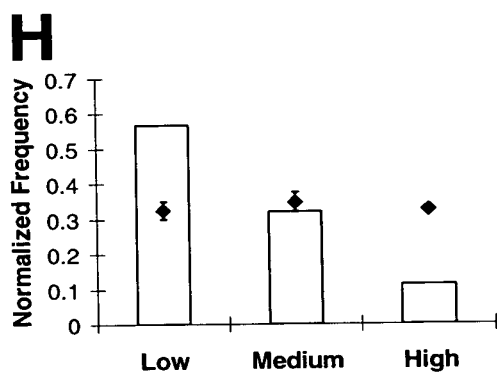
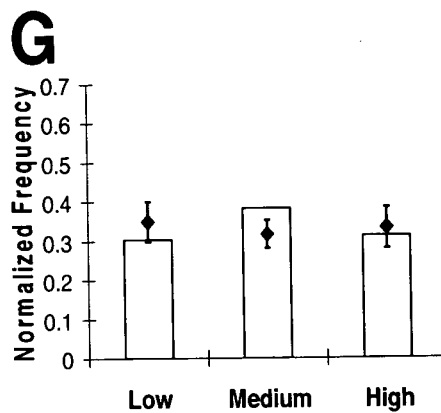
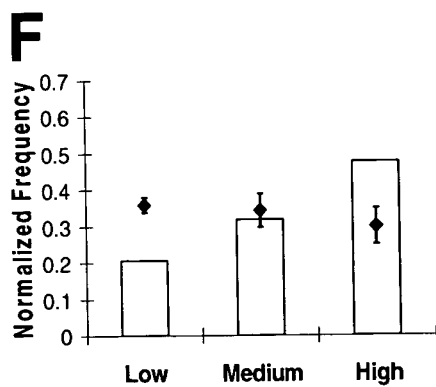


Figure 3

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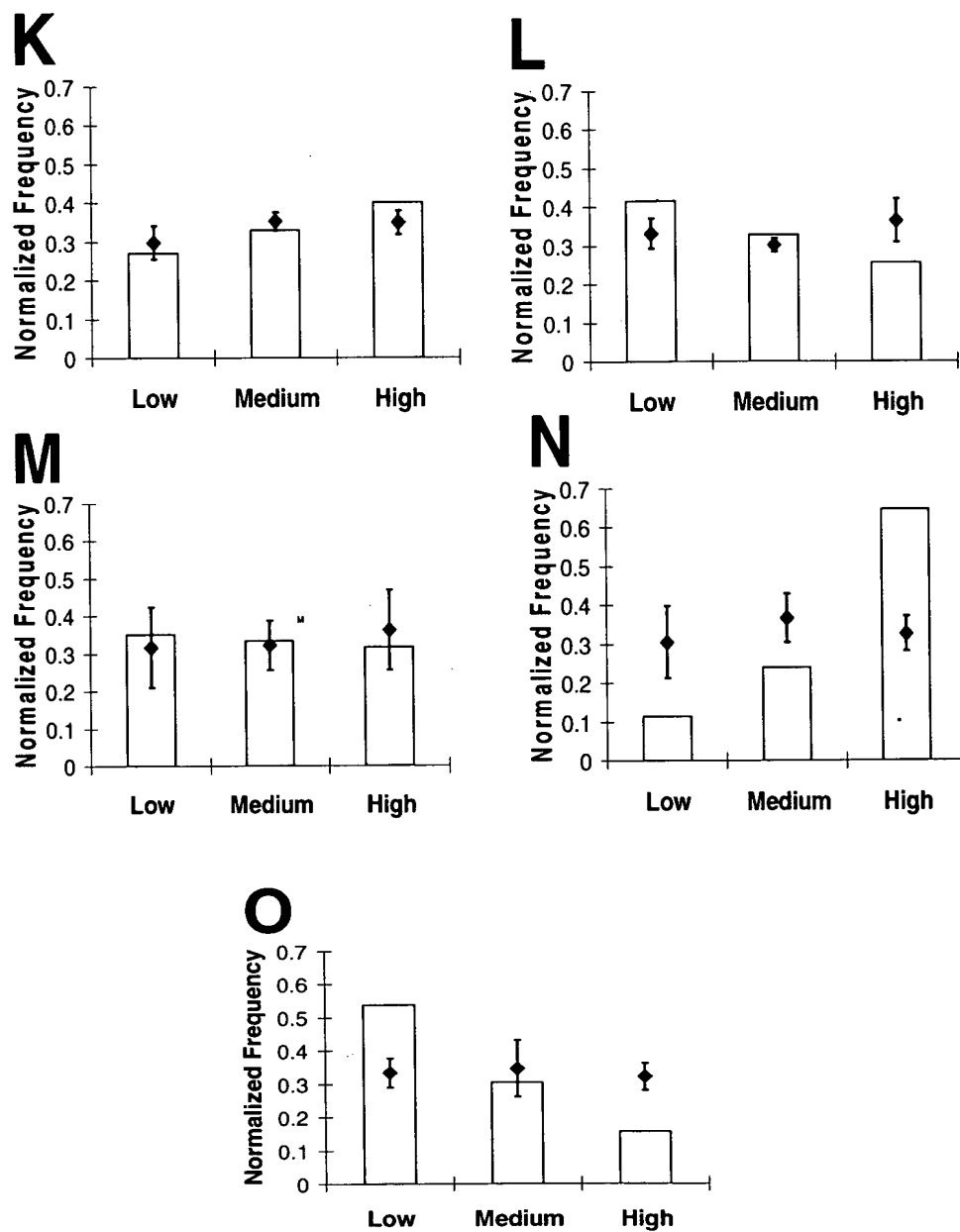


Figure 3

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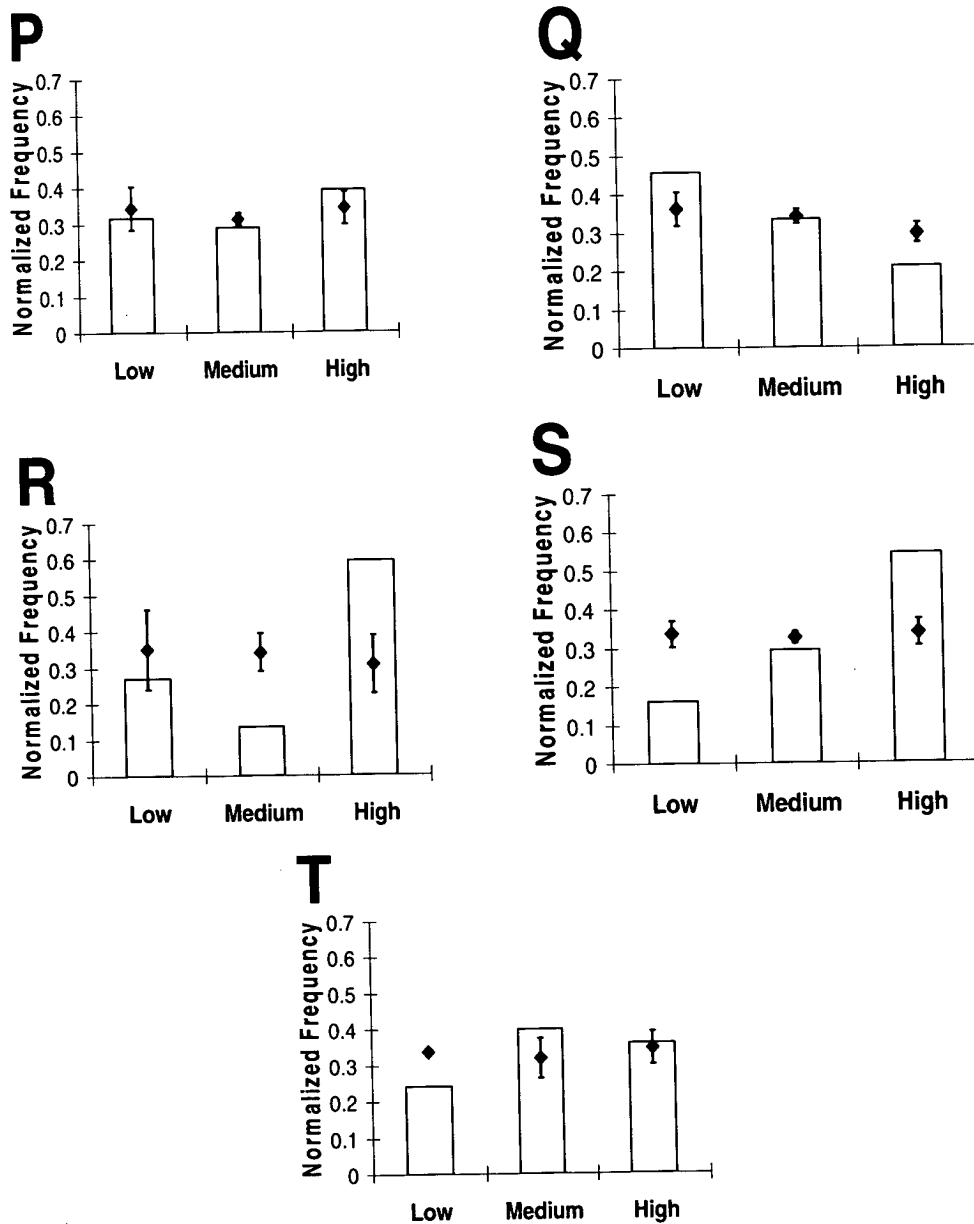


Figure 3

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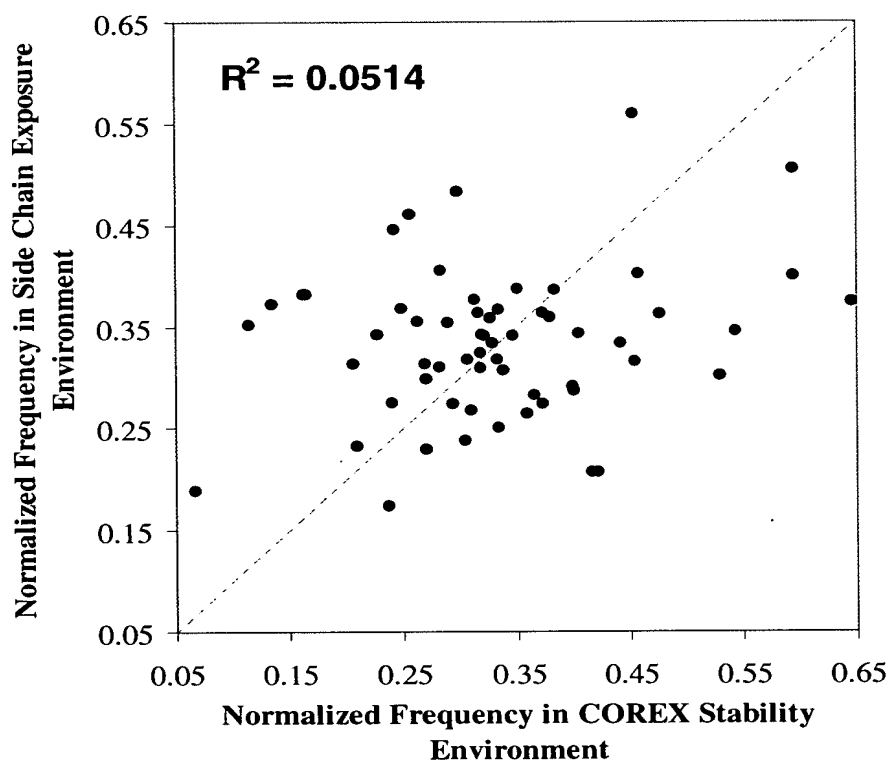


Figure 4



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**In<sub>K<sub>f</sub></sub> Scoring Matrix  
Local Alignment Algorithm**

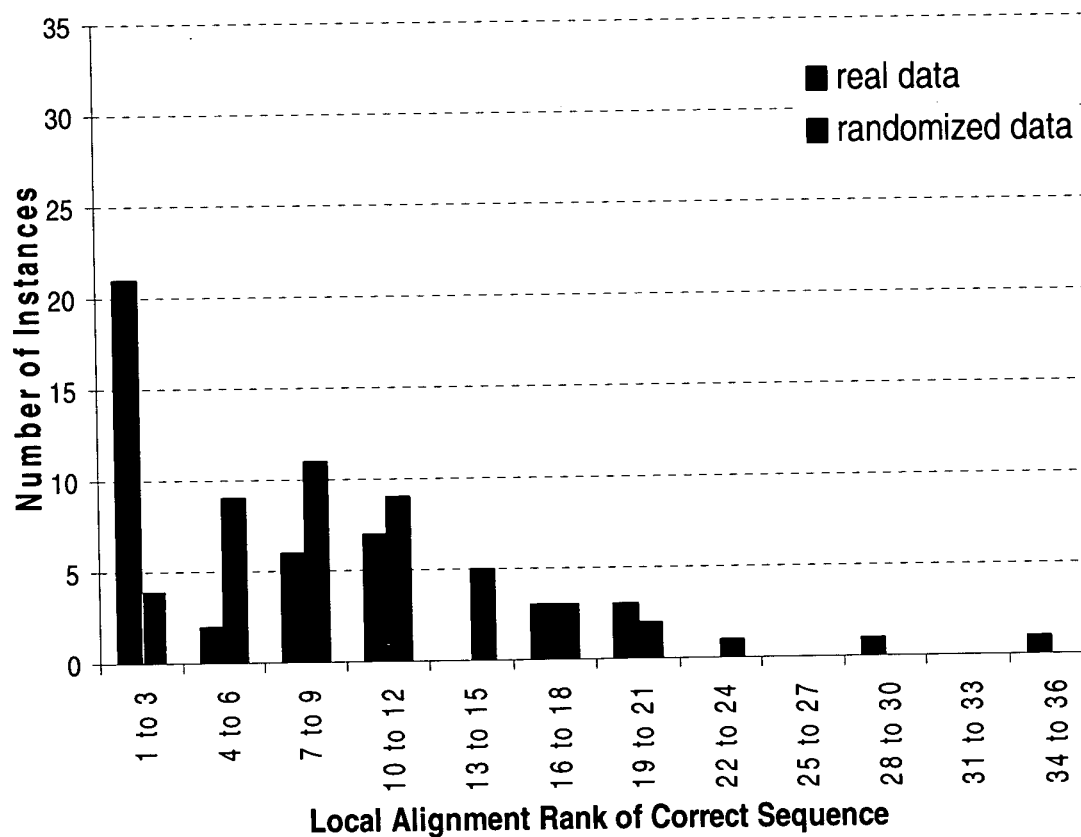


Figure 5A

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**InK<sub>f</sub> Scoring Matrix  
Global Alignment Algorithm**

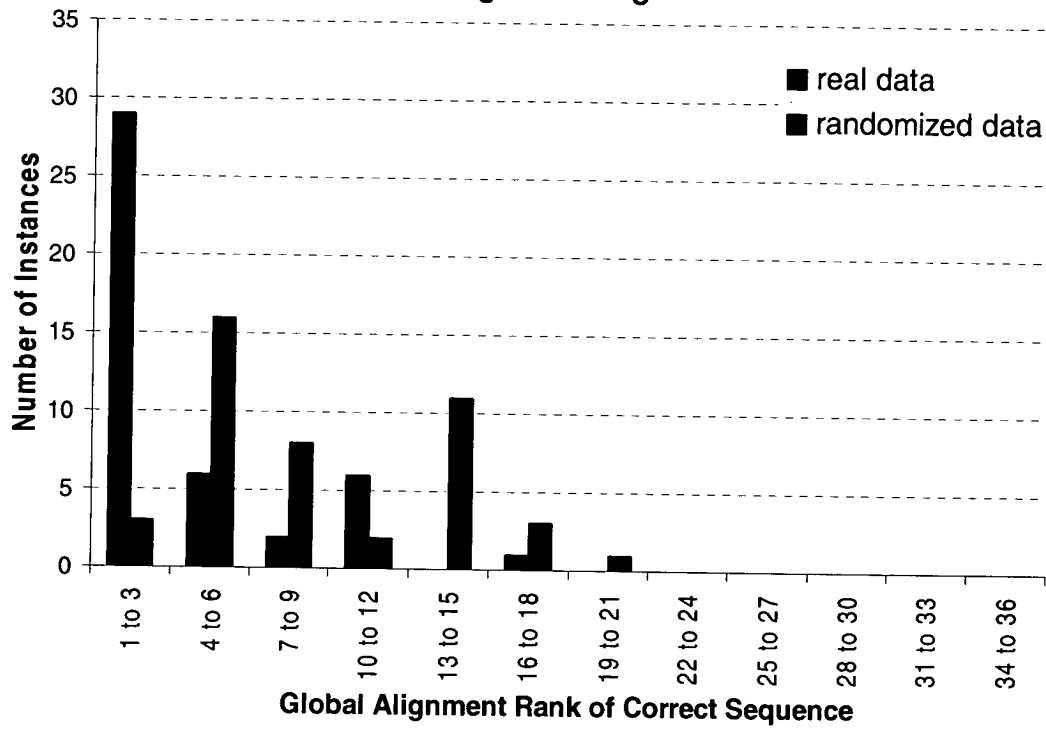


Figure 5B

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Secondary Structure Scoring Matrix  
Local Alignment Algorithm

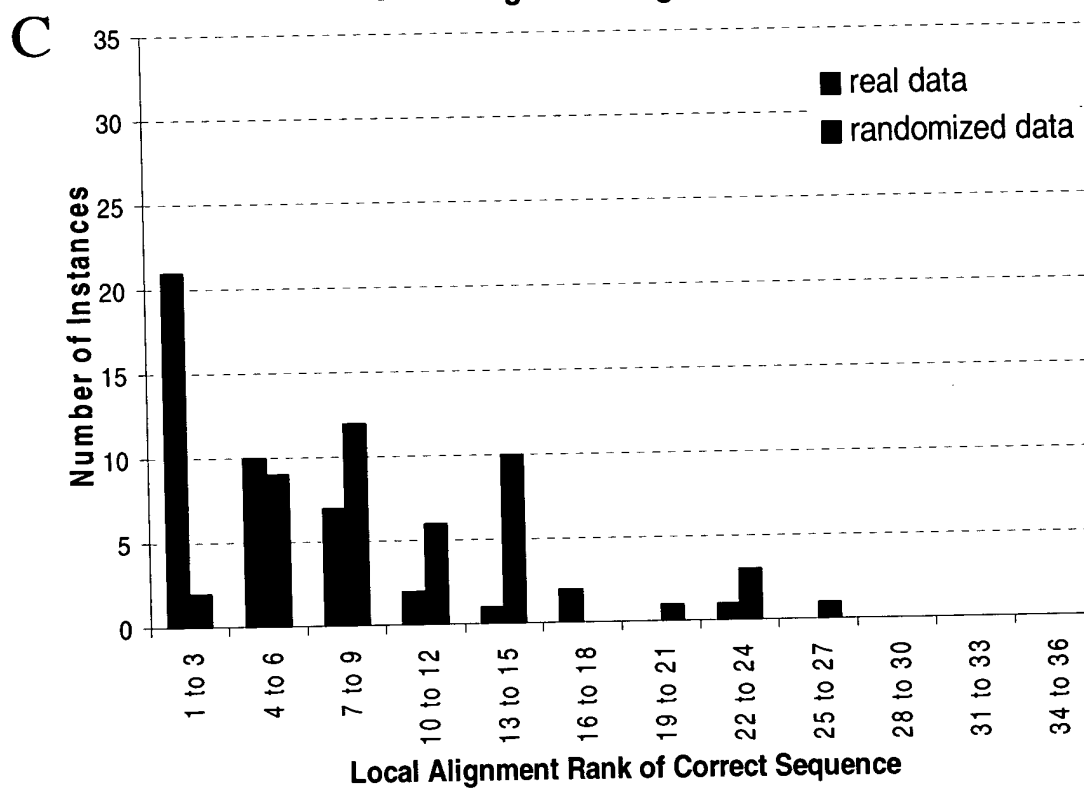
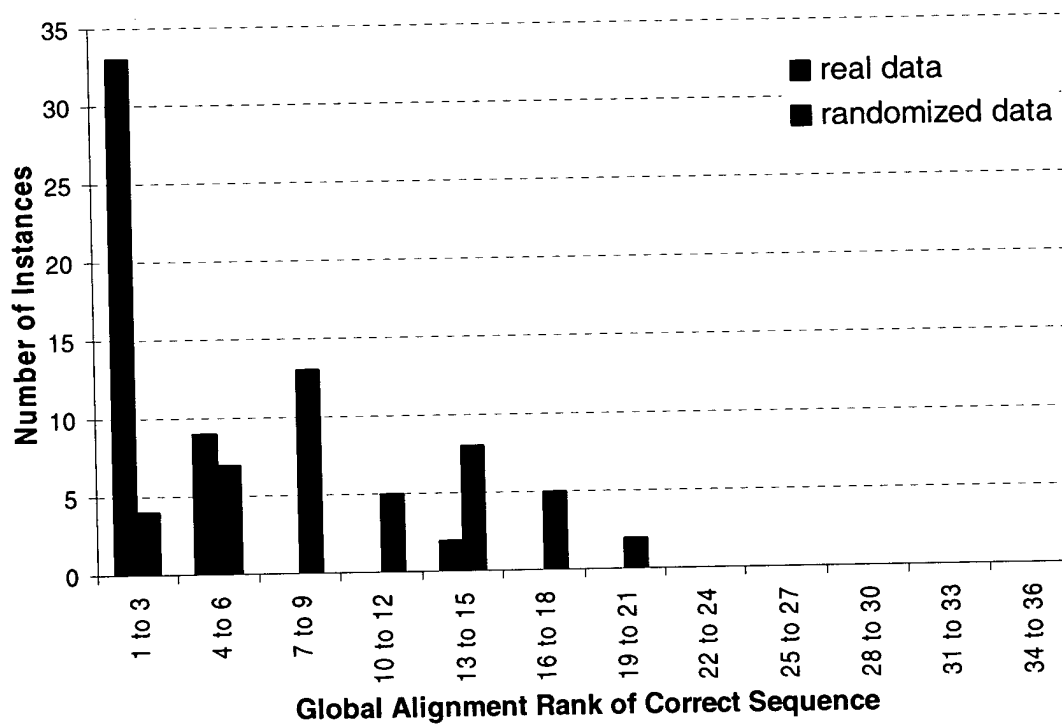


Figure 5

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**Secondary Structure Scoring Matrix  
Global Alignment Algorithm**

**D**



**Figure 5**

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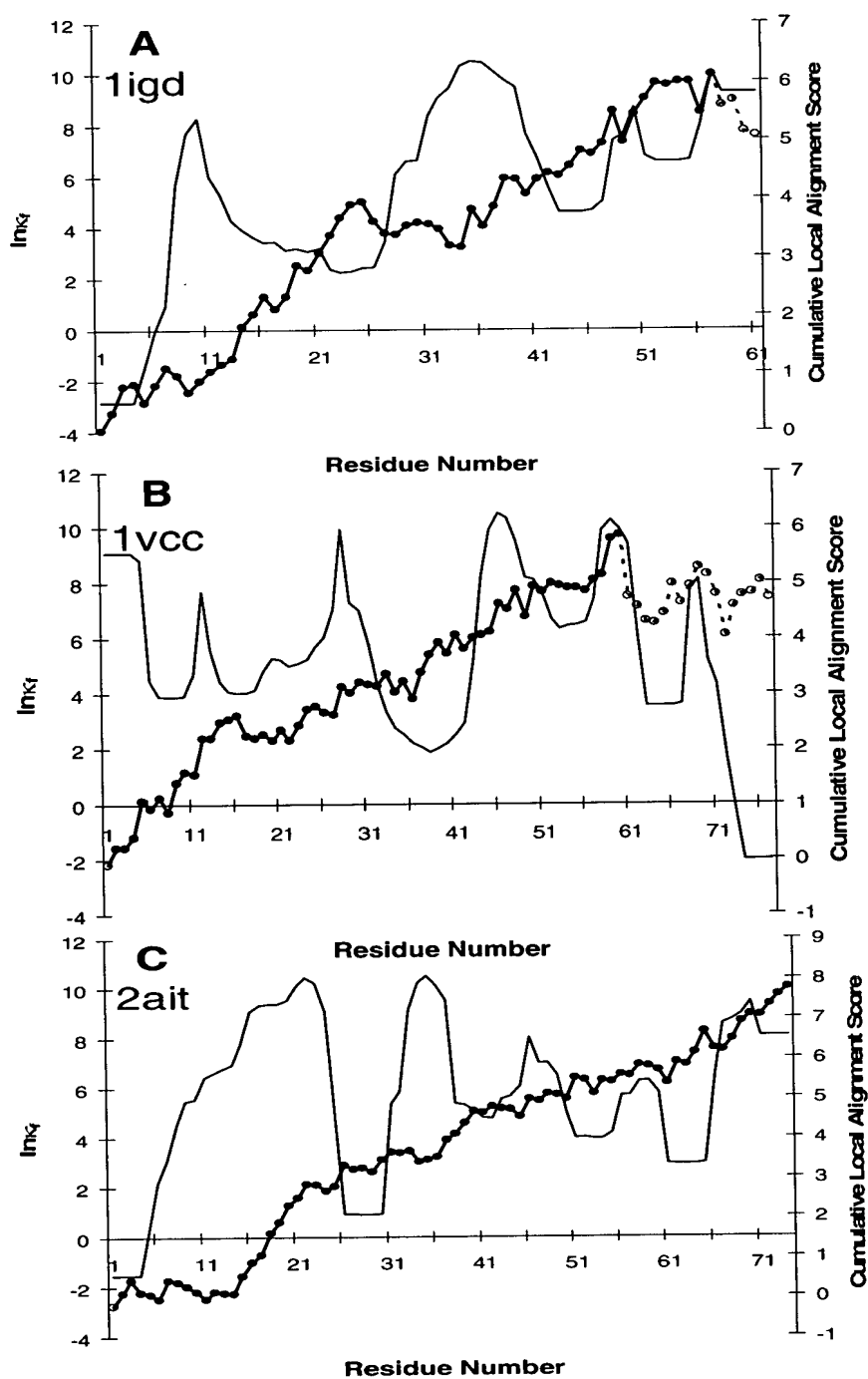


Figure 6

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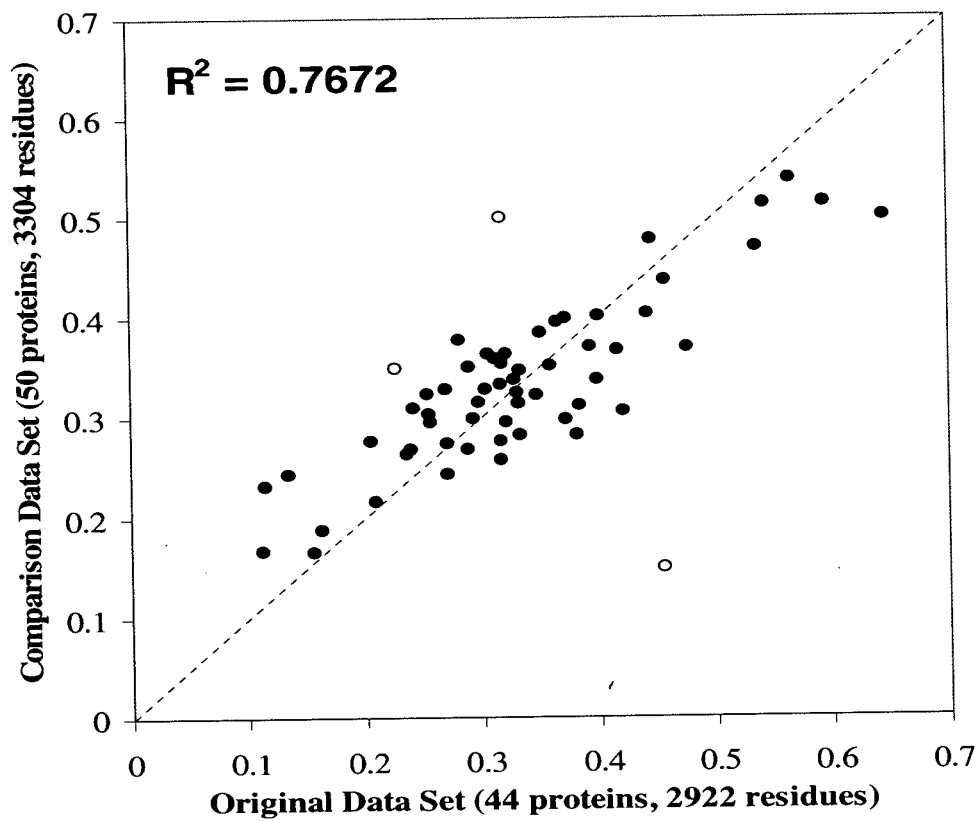
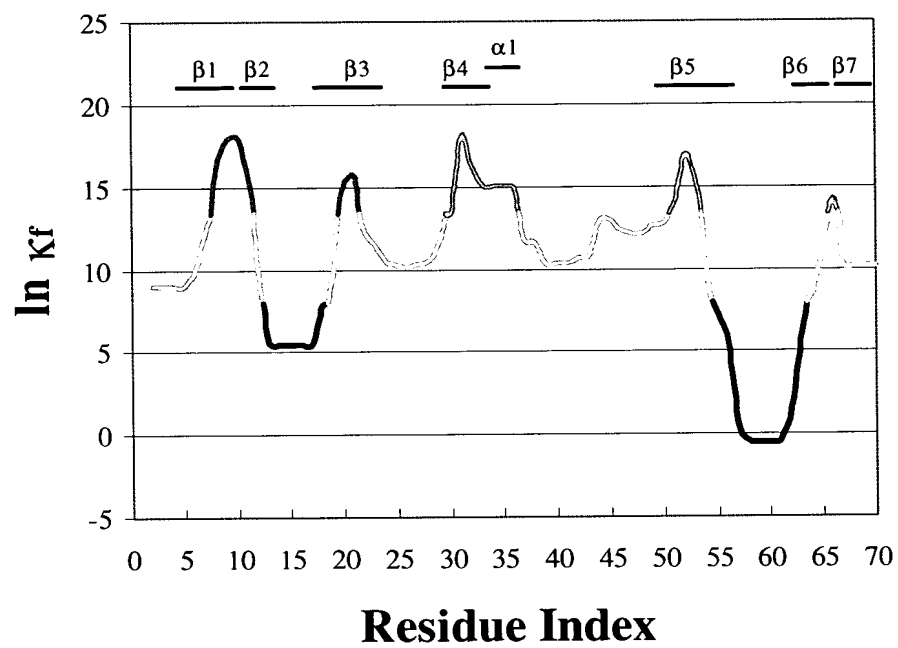


Figure 7

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A

CspA (1MJC)



B

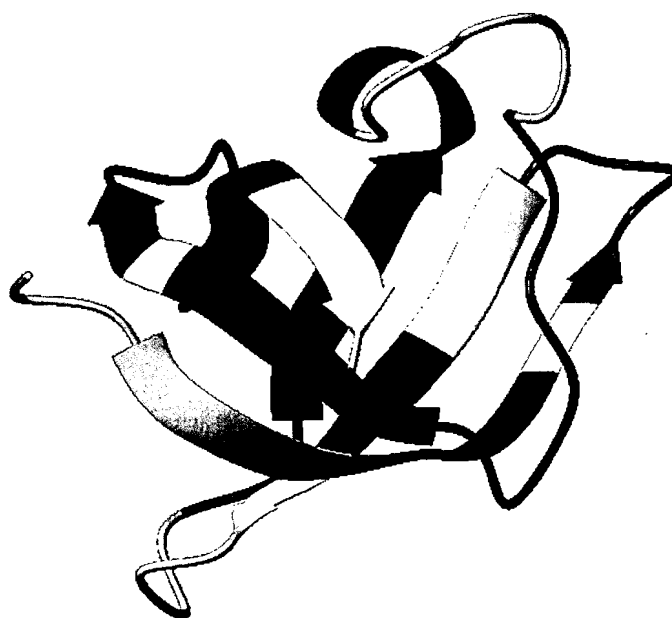


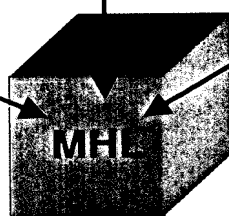
Figure 8

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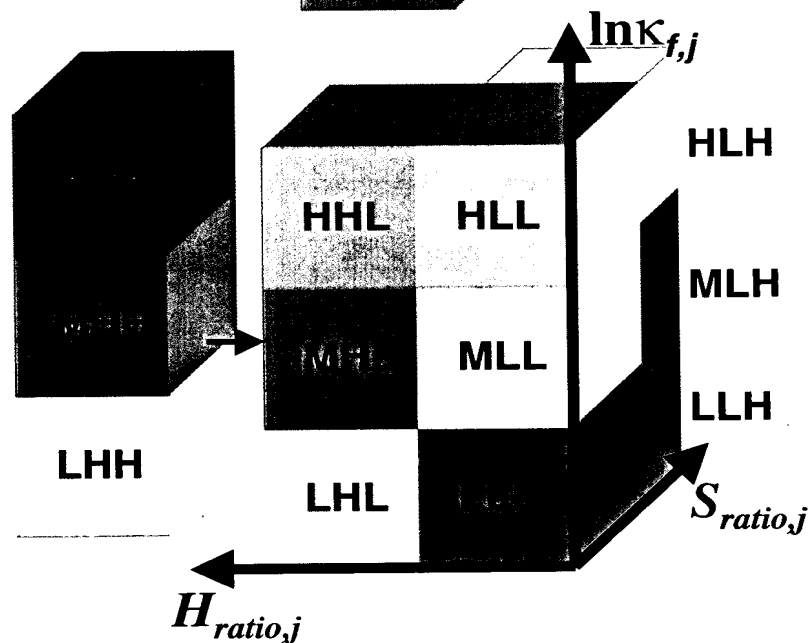
(a)

3 Stability Environments: Low (L), Medium (M), High (H)    2 Enthalpy Environments: Low (L), High (H)    2 Entropy Environments: Low (L), High (H)

$$\kappa_{f,j} = \frac{\sum P_{f,j}}{\sum P_{nf,j}} \quad H_{ratio,j} = \frac{\Delta H_{pol,j}}{\Delta H_{apol,j}} \quad S_{ratio,j} = \frac{\Delta S_{conf,j}}{\Delta G_{solv,j}}$$



(b)



(c)



1HDJ:\_  
(All Alpha)



1PGB:\_  
(Alpha + Beta)



1SHG:\_  
(All Beta)

Figure 9

20047724.01502



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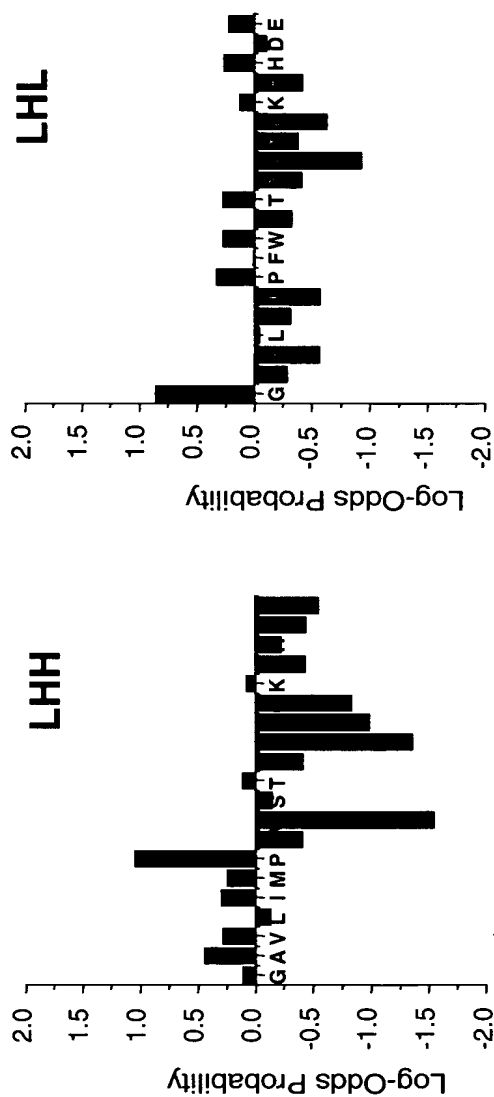


Figure 10A

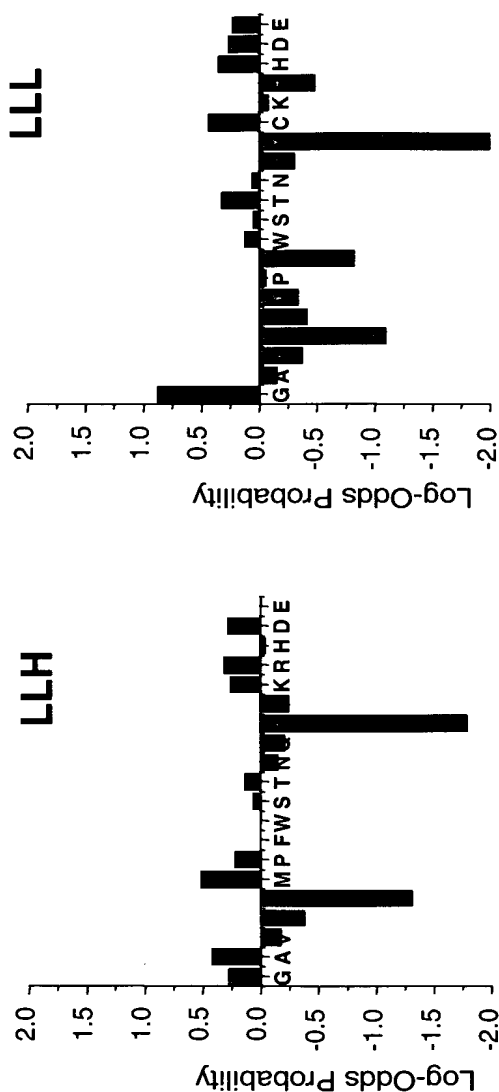


Figure 10C

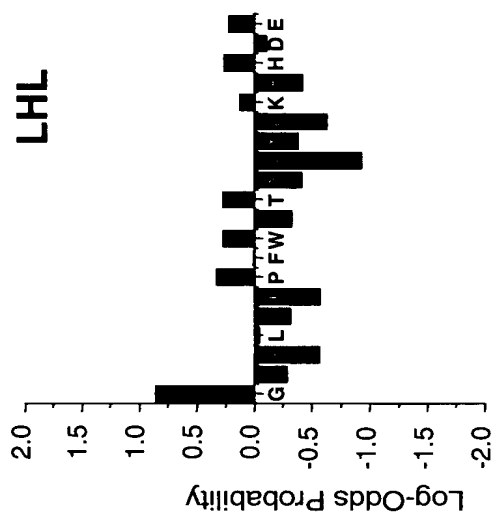


Figure 10B

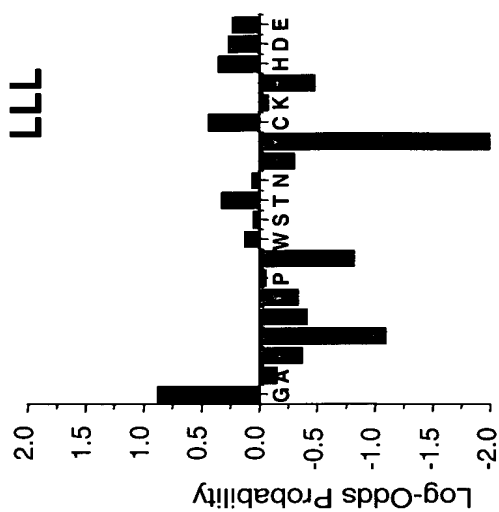


Figure 10D

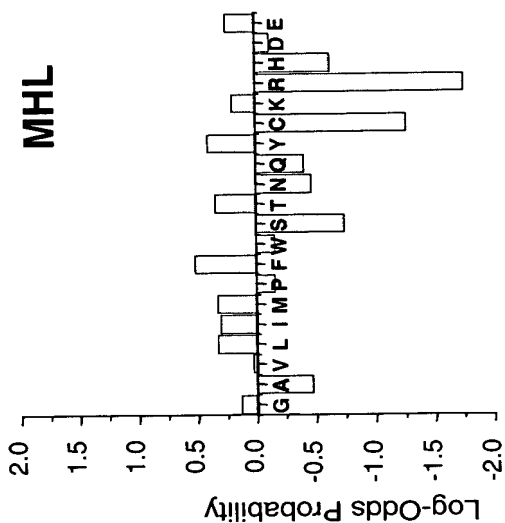


Figure 10E

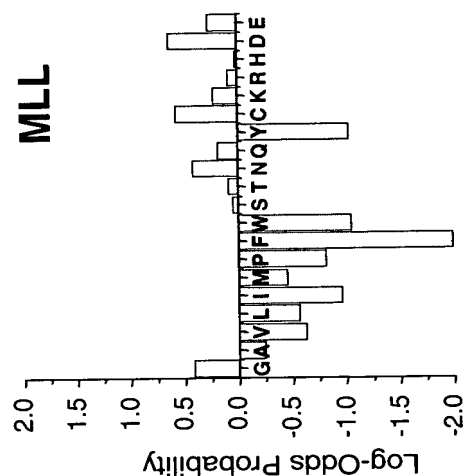


Figure 10F

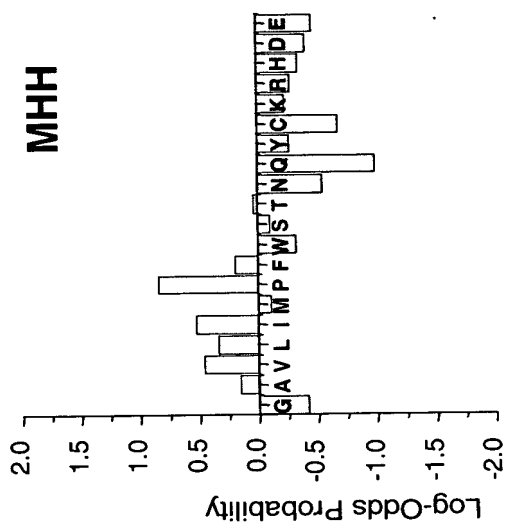


Figure 10G

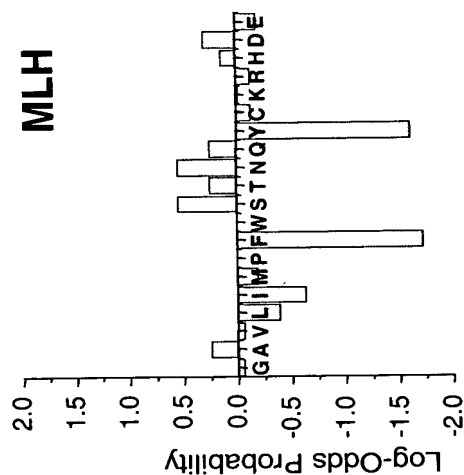


Figure 10H

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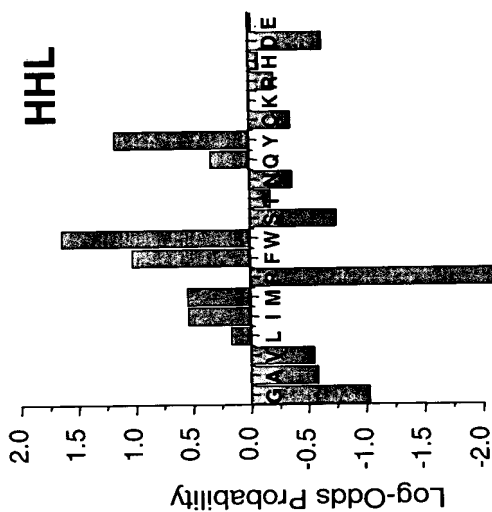


Figure 10J

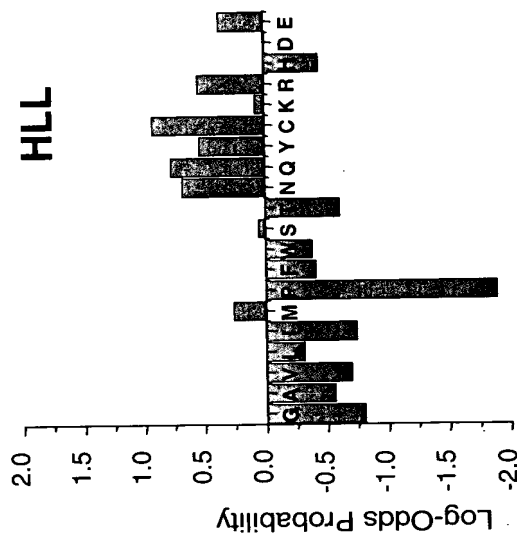


Figure 10L

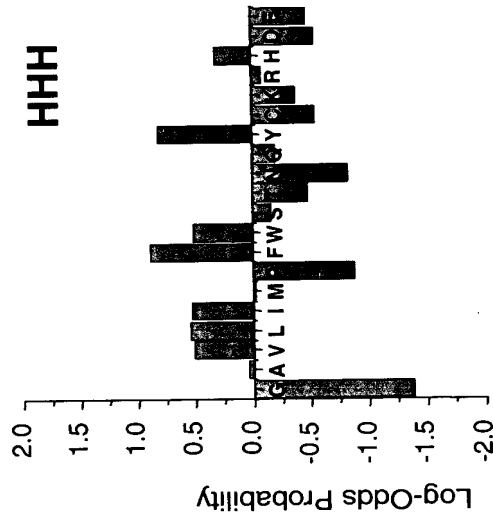


Figure 10I

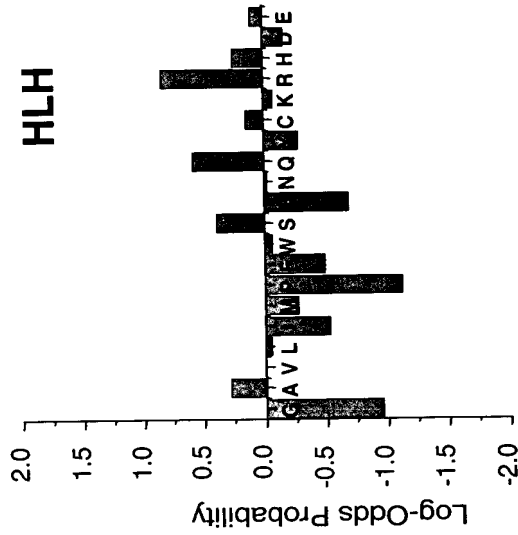
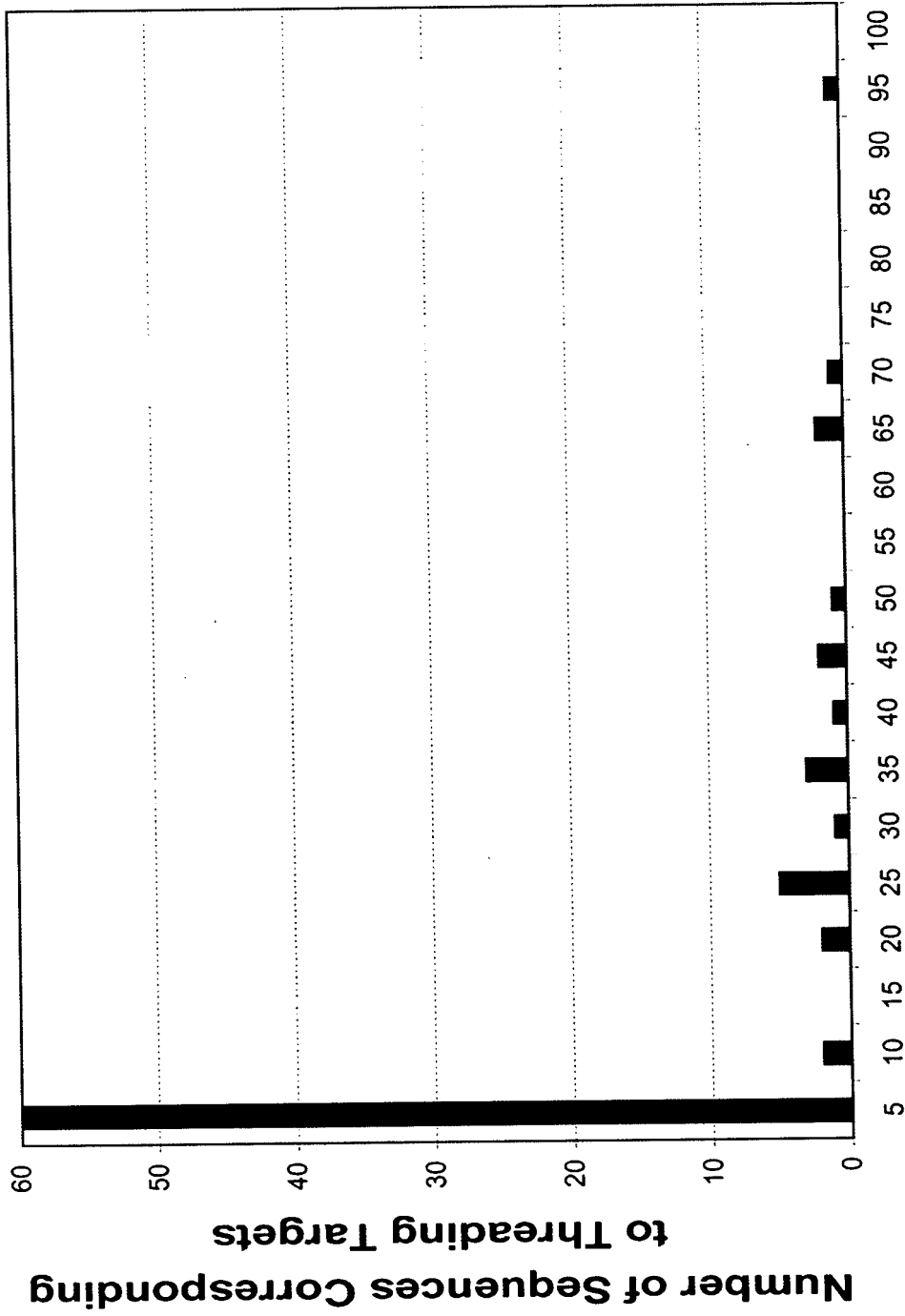


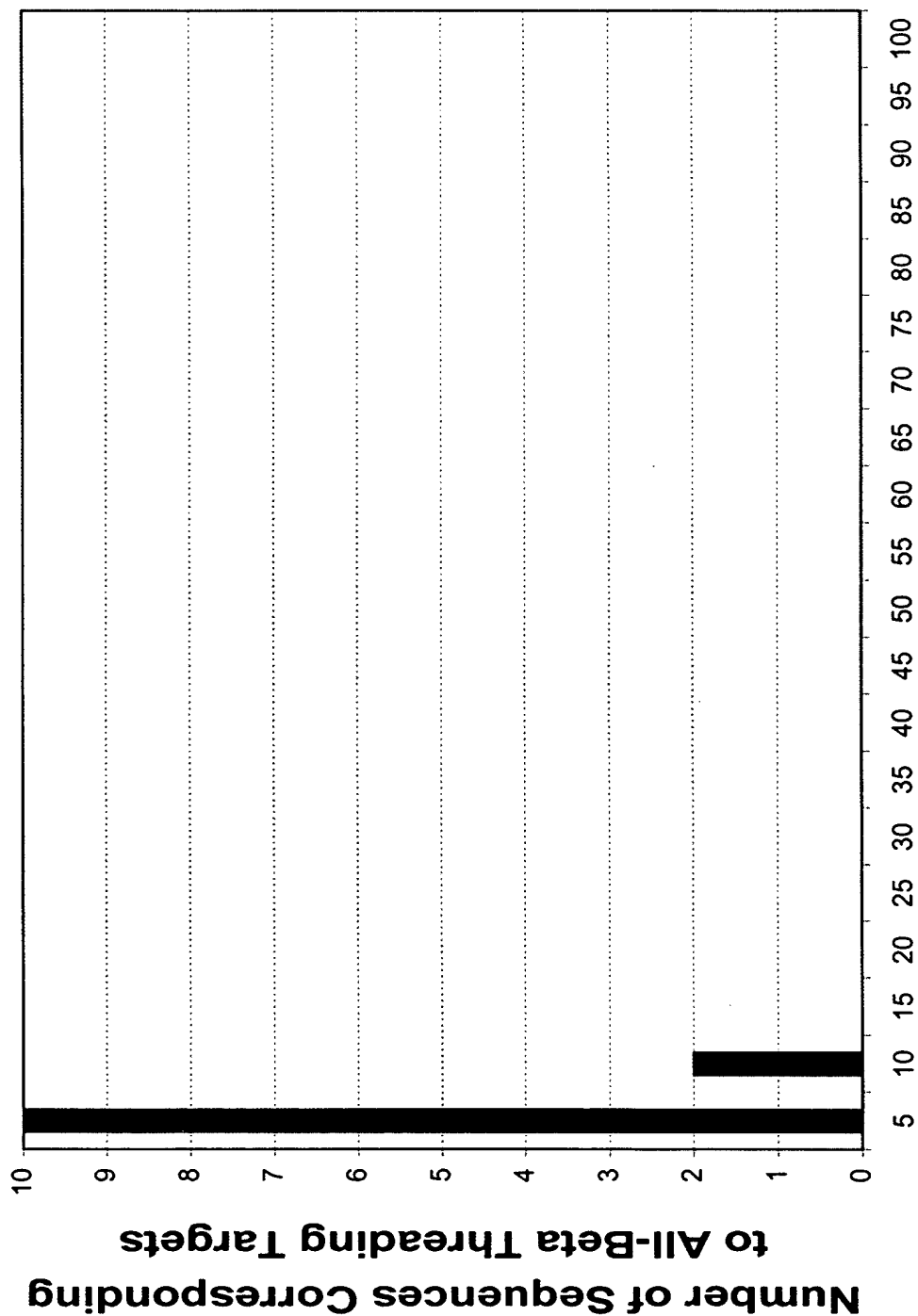
Figure 10K

205TF0"422400F



Percentile Rank of Sequence

Figure 11



Percentile Rank of Sequence

Figure 12